

## **REMARKS**

### **INTRODUCTION**

In accordance with the foregoing, claims 1, 8, 13-18, and 39 have been amended. No new matter is being presented, and approval and entry are respectfully requested. Claims 1, 2, 6, 8-10, 12-18 and 39 are pending and under consideration. Reconsideration is requested.

### **OBJECTION FOR INFORMALITIES:**

In the Office Action, at page 2, number 3, the Examiner objected to claim 39 because of informalities. Applicants submit that the informality objections regarding claim 39, are overcome in view of the amended claim 39 as submitted herein.

### **PRIOR ART REJECTIONS:**

In the Office Action, at page 2, number 4, and page 3, number 5, the Examiner rejected claims 1, 2, 6, 8-10, 12-18, and 39 as being unpatentable with regard to Mole et al (US 6,060,956). The reasons for the rejections are set forth in the Office Action and are therefore not repeated. The rejections are traversed, and reconsideration is requested.

Regarding claims 1, 2, 6, 10, 13-18, and 39, Applicants submit that Mole does not teach that the capacitor is directly connected to the first and second branching nodes.

For example, amended, independent claim 1 recites "...a capacitor, provided between the first branching node and the second branching node, and being directly connected to the first branching node and the second branching node."

Similarly, amended, independent claims 13 and 14 recite "...a capacitor, ...directly connected to the first branching node and the second branching node."

Amended, independent claim 15 recites "...a capacitor, ...directly connected to the first branching node and the second branching node."

Amended, independent claim 16 recites "...a capacitor, ...directly connected to the first branching node and the second branching node."

Amended, independent claim 17 recites "...a capacitor, provided between a first connection node and a second connection node, which is directly connected to the first branching node and the second branching node..."

Amended, independent claim 18 recites "...a capacitor, ...directly connected to the connection node and the another connection node."

And amended, independent claim 39 recites "...a capacitor, provided between the first branching node and the second branching node, and being directly connected to the first branching node and the second branching node.

Accordingly, Applicants respectfully submit that, independent claims 1, 13-18, and 39 patentably distinguish over the cited art, and should be allowable for at least the above-mentioned reasons. Further, Applicants respectfully submits that, claims 2, 6, and 10, which ultimately depend from independent claim 1, should be allowable for at least the same reasons as claim 1, as well as for the additional features recited therein.

Regarding claims 8, 9, and 12, Mole discloses that bias voltages VB1 and VB2 are supplied to bases of transistors constituting a differential pair, and that when VB1 increases, VB2 decreases. And conversely, when VB1 decreases, VB2 increases. Accordingly, Mole does not disclose, nor assume, that both of the transistors constituting the differential pair turn off.

"The constant current source K1 maintains a constant current flow such that with appropriate and equal bias voltage (VB1=VB2) applied at the bases of the transistors Q1 and Q2, the currents flowing through each transistor Q1 and Q2 will be equal. As VB1 is increased and VB2 reduced, transistor Q2 eventually turns off leaving all the current to flow through transistor Q1; and vice versa." (Mole, col. 4, lines 24-30)

In contrast, in the present invention, a current path is formed by way of a capacitor in case both of the transistors constituting a differential pair turn off and a current path disappears, whereby a voltage change at connection nodes of the differential pair and a current source is prevented.

For example, amended, independent claim 8 recites "...a first differential pair receiving differential signals, said first differential pair having first transistors; a first current source, connected to one end of the first differential pair at a first branching node branching current from the first current source to the first transistors; a second differential pair receiving the differential signals, said second differential pair having second transistors; a second current source connected to one end of the second differential pair at a second branching node branching current from the second current source to the second transistors; and a transitional response circuit forming a current path allowing the current supplied from one of the first and second

current sources to flow when the current to one of the first and second differential pair is cut off."

Accordingly, Applicants respectfully submit that, independent claim 8 patentably distinguishes over the cited art, and should be allowable for at least the above-mentioned reasons. Further, Applicants respectfully submits that, claims 9 and 12, which ultimately depend from independent claim 8, should be allowable for at least the same reasons as claim 8, as well as for the additional features recited therein.

**CONCLUSION:**

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

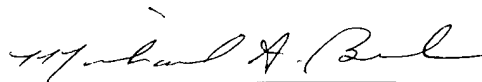
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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